USPTO Serial Number: 09/726,928
Link C. Jaw *et al.*
Reply to Office Action dated March 29, 2004

REMARKS

Applicants acknowledge the allowance of claims 1-16.

The Office Action rejects claims 17-22 under 35 U.S.C. 102(e) as being anticipated by Larkin. Applicants have cancelled claims 17-22. The rejection is considered moot.

Applicants have added new claims 23-54. New claim 23 recites a computer system for detecting an anomaly in a physical system comprising means for providing a model of the physical system, means for receiving a plurality of sensor measurements from the physical system, wherein at least one sensor measurement is used as an independent variable and at least one sensor measurement is used as an actual sensor measurement, means for processing the independent variable through the model of the physical system to generate an estimated variable as a function of the independent variable, and means for comparing the estimated variable and the actual sensor measurement to determine an anomaly in the physical system.

The Larkin reference does not teach or suggest means for receiving a plurality of sensor measurements from the physical system, wherein at least one sensor measurement is used as an independent variable and at least one sensor measurement is used as an actual sensor measurement, means for processing the independent variable through the model of the physical system to generate an estimated variable as a function of the independent variable, and means for comparing the estimated variable and the actual sensor measurement to determine an anomaly in the physical system.

Claim 23 is believed to patentably distinguish over the Larkin reference and the other prior art of record. Claims 24-31 are believed to be in condition for allowance as each is dependent from an allowable base claim.

New claim 32 recites an apparatus for detecting an anomaly in a system comprising a plurality of sensors coupled to the system for providing sensor measurements, wherein a first sensor measurement represents an independent variable and a second sensor measurement represents an actual sensor measurement. A computational system provides a model of the system. The computational system includes means for processing the independent variable through the model of the system to generate an estimated variable as a function of the independent variable, and means for comparing the estimated variable and the actual sensor measurement to determine an anomaly in the system.

Larkin does not teach or suggest means for processing the independent variable through the model of the system to generate an estimated variable as a function of the independent variable, and means for comparing the estimated variable and the actual sensor measurement to determine an anomaly in the system.

Claim 32 is believed to patentably distinguish over the Larkin reference and the other prior art of record. Claims 33-39 are believed to be in condition for allowance as each is dependent from an allowable base claim.

New claim 40 recites a method for detecting an anomaly in a physical system comprising providing a model of the physical system, receiving a plurality of sensor measurements from the physical system, wherein a first sensor measurement is used as an independent variable and a second sensor measurement is used as an actual sensor measurement, processing the independent

variable through the model of the physical system to generate an estimated variable as a function of the independent variable, and comparing the estimated variable and the actual sensor measurement to determine an anomaly in the physical system.

Larkin does not teach or suggest processing the independent variable through the model of the physical system to generate an estimated variable as a function of the independent variable, and comparing the estimated variable and the actual sensor measurement to determine an anomaly in the physical system.

Claim 40 is believed to patentably distinguish over the Larkin reference and the other prior art of record. Claims 41-46 are believed to be in condition for allowance as each is dependent from an allowable base claim.

New claim 47 recites a system analysis tool for detecting an anomaly in a system comprising a plurality of sensors coupled to the system for providing sensor measurements, wherein a first sensor measurement is used an independent variable and a second sensor measurement is used an actual sensor measurement. A model of the system includes means for generating an estimated variable as a function of the independent variable, and means for comparing the estimated variable and the actual sensor measurement to determine an anomaly in the system.

Larkin does not teach or suggest a model of the system having means for generating an estimated variable as a function of the independent variable, and means for comparing the estimated variable and the actual sensor measurement to determine an anomaly in the system.

Claim 47 is believed to patentably distinguish over the Larkin reference and the other prior art of record. Claims 48-

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54 are believed to be in condition for allowance as each is dependent from an allowable base claim.

Applicants believe that all information and requirements for the application have been provided to the USPTO. If there are matters that can be discussed by telephone to further the prosecution of the Application, Applicant(s) invite the Examiner to call the undersigned attorney at the Examiner's convenience.

The Commissioner is hereby authorized to charge any fees due with this response to USPTO Deposit Account 17-0055.

Respectfully submitted,
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6/29, 2004 By: Robert D. Atkins

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